

## SEQUENCE LISTING

<110> SERVANT, GUY  
 CHANG, HONG  
 REDCROW, CYRIL  
 RAY, SUMITA  
 CLARK, IMRAN

<120> IMPROVED ELECTROPHYSIOLOGICAL ASSAYS USING OOCYTES THAT  
 EXPRESS HUMAN ENaC AND THE USE OF PHENAMIL TO IMPROVE  
 THE EFFECT OF ENaC ENHANCERS IN ASSAYS USING MEMBRANE  
 POTENTIAL REPORTING DYES

<130> 67824.431530

<140> 10/563,758

<141> 2006-01-09

<150> PCT/US04/021853

<151> 2004-07-09

<150> 60/485,745

<151> 2003-07-10

<150> 10/133,573

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<150> 60/287,413

<151> 2001-05-01

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<170> PatentIn Ver. 3.3

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&lt;213&gt; Homo sapiens

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Leu	Val	Thr	Cys	Phe	Phe	Asp	Gly	Val	Ser	Cys	Asp	Ala	Arg	Asn	Phe		
			260				265						270				
Thr	Leu	Phe	His	His	Pro	Met	His	Gly	Asn	Cys	Tyr	Thr	Phe	Asn	Asn		
		275					280					285					
Arg	Glu	Asn	Glu	Thr	Ile	Leu	Ser	Thr	Ser	Met	Gly	Gly	Ser	Glu	Tyr		
	290					295					300						
Gly	Leu	Gln	Val	Ile	Leu	Tyr	Ile	Asn	Glu	Glu	Glu	Tyr	Asn	Pro	Phe		
	305				310				315						320		

Leu Val Ser Ser Thr Gly Ala Lys Val Ile Ile His Arg Gln Asp Glu  
 325 330 335  
 Tyr Pro Phe Val Glu Asp Val Gly Thr Glu Ile Glu Thr Ala Met Val  
 340 345 350  
 Thr Ser Ile Gly Met His Leu Thr Glu Ser Phe Lys Leu Ser Glu Pro  
 355 360 365  
 Tyr Ser Gln Cys Thr Glu Asp Gly Ser Asp Val Pro Ile Arg Asn Ile  
 370 375 380  
 Tyr Asn Ala Ala Tyr Ser Leu Gln Ile Cys Leu His Ser Cys Phe Gln  
 385 390 395 400  
 Thr Lys Met Val Glu Lys Cys Gly Cys Ala Gln Tyr Ser Gln Pro Leu  
 405 410 415  
 Pro Pro Ala Ala Asn Tyr Cys Asn Tyr Gln Gln His Pro Asn Trp Met  
 420 425 430  
 Tyr Cys Tyr Tyr Gln Leu His Arg Ala Phe Val Gln Glu Glu Leu Gly  
 435 440 445  
 Cys Gln Ser Val Cys Lys Glu Ala Cys Ser Phe Lys Glu Trp Thr Leu  
 450 455 460  
 Thr Thr Ser Leu Ala Gln Trp Pro Ser Val Val Ser Glu Lys Trp Leu  
 465 470 475 480  
 Leu Pro Val Leu Thr Trp Asp Gln Gly Arg Gln Val Asn Lys Lys Leu  
 485 490 495  
 Asn Lys Thr Asp Leu Ala Lys Leu Leu Ile Phe Tyr Lys Asp Leu Asn  
 500 505 510  
 Gln Arg Ser Ile Met Glu Ser Pro Ala Asn Ser Ile Glu Met Leu Leu  
 515 520 525  
 Ser Asn Phe Gly Gly Gln Leu Gly Leu Trp Met Ser Cys Ser Val Val  
 530 535 540  
 Cys Val Ile Glu Ile Ile Glu Val Phe Phe Ile Asp Phe Phe Ser Ile  
 545 550 555 560  
 Ile Ala Arg Arg Gln Trp Gln Lys Ala Lys Glu Trp Trp Ala Trp Lys  
 565 570 575  
 Gln Ala Pro Pro Cys Pro Glu Ala Pro Arg Ser Pro Gln Gly Gln Asp  
 580 585 590  
 Asn Pro Ala Leu Asp Ile Asp Asp Asp Leu Pro Thr Phe Asn Ser Ala  
 595 600 605

Leu His Leu Pro Pro Ala Leu Gly Thr Gln Val Pro Gly Thr Pro Pro  
 610 615 620  
 Pro Lys Tyr Asn Thr Leu Arg Leu Glu Arg Ala Phe Ser Asn Gln Leu  
 625 630 635 640  
 Thr Asp Thr Gln Met Leu Asp Glu Leu  
 645

<210> 7  
 <211> 1916  
 <212> DNA  
 <213> Homo sapiens

<400> 7  
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 cccaaggagg ggcaccagga ggggctggtg gagctgcccg cctcgttccg ggagctgctc 180  
 accttcttct gcaccaatgc caccatccac ggcgccatcc gcctggtctg ctcccgcggg 240  
 aaccgcctca agacgacgtc ctgggggctg ctgtccctgg gagccctggg cgcgctctgc 300  
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 gtgcactcgg agcgcaagct gctcccgtg gtcaccctgt gtgacgggaa cccacgtcgg 420  
 ccgagtccgg tcctccgcca tctggagctg ctggacgagt ttgccaggga gaacattgac 480  
 tccctgtaca acgtcaacct cagcaaaggc agagccgcc tctccgccac tgtccccgc 540  
 cagagcccc ccttccacct ggaccgggag atcctgtctg agaggctgag ccaactcgggc 600  
 agccgggtca gagtggggtt cagactgtgc aacagcacgg gcggcgactg cttttaccga 660  
 ggctacacgt caggcgtggc ggctgtccag gactggtacc acttccacta tgtggatatc 720  
 ctggccctgc tgcccgggc atgggaggac agccacggga gccaggacgg ccacttcgtc 780  
 ctctcctgca gttacgatgg cctggactgc caggcccagc agttccggac cttccaccac 840  
 cccacctacg gcagctgcta caggtcgtat ggctgtctgga cagctcagcg ccccggcac 900  
 acccacggag tcggcctggg cctcagggtt gagcagcagc ctcacctccc tctgctgtcc 960  
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 cacagcttca gcgtccggcc agggacggag gccaccatca gcatccgaga ggacgaggtg 1080  
 caccggctcg ggagccccta cggccactgc accgccggcg ggggaaggcgt ggaggtggag 1140  
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 aagctctcca ctgggacctc caggtggcct tccgccaagt cagctggatg gactctggcc 1440  
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 atcaacatcg tctaccagga gctcaactac cgctcagtgg aggaggcgcc cgtgtactcg 1560  
 gtgccgcagc tgetctccgc catgggcagc ctctacagcc tgtggtttg ggccctccgtc 1620  
 ctctccctcc tggagctcct ggagctgctg ctcgatgctt ctgccctcac cctggtgcta 1680  
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 gcgtccagct caagccagag gccagtcaga tgccccgcgc tgcaggcggc acgtcagatg 1800  
 acccgagacc cagcgggcct catctcccac gggatgatgt tccaggggtt ctggcgggag 1860  
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&lt;210&gt; 8

&lt;211&gt; 638

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 8

Met Ala Glu His Arg Ser Met Asp Gly Arg Met Glu Ala Ala Thr Arg  
 1 5 10 15

Gly Gly Ser His Leu Gln Ala Ala Ala Gln Thr Pro Pro Arg Pro Gly  
 20 25 30

Pro Pro Ser Ala Pro Pro Pro Pro Pro Lys Glu Gly His Gln Glu Gly  
 35 40 45

Leu Val Glu Leu Pro Ala Ser Phe Arg Glu Leu Leu Thr Phe Phe Cys  
 50 55 60

Thr Asn Ala Thr Ile His Gly Ala Ile Arg Leu Val Cys Ser Arg Gly  
 65 70 75 80

Asn Arg Leu Lys Thr Thr Ser Trp Gly Leu Leu Ser Leu Gly Ala Leu  
 85 90 95

Val Ala Leu Cys Trp Gln Leu Gly Leu Leu Phe Glu Arg His Trp His  
 100 105 110

Arg Pro Val Leu Met Ala Val Ser Val His Ser Glu Arg Lys Leu Leu  
 115 120 125

Pro Leu Val Thr Leu Cys Asp Gly Asn Pro Arg Arg Pro Ser Pro Val  
 130 135 140

Leu Arg His Leu Glu Leu Leu Asp Glu Phe Ala Arg Glu Asn Ile Asp  
 145 150 155 160

Ser Leu Tyr Asn Val Asn Leu Ser Lys Gly Arg Ala Ala Leu Ser Ala  
 165 170 175

Thr Val Pro Arg His Glu Pro Pro Phe His Leu Asp Arg Glu Ile Arg  
 180 185 190

Leu Gln Arg Leu Ser His Ser Gly Ser Arg Val Arg Val Gly Phe Arg  
 195 200 205

Leu Cys Asn Ser Thr Gly Gly Asp Cys Phe Tyr Arg Gly Tyr Thr Ser  
 210 215 220

Gly Val Ala Ala Val Gln Asp Trp Tyr His Phe His Tyr Val Asp Ile  
 225 230 235 240

Leu Ala Leu Leu Pro Ala Ala Trp Glu Asp Ser His Gly Ser Gln Asp  
 245 250 255

Gly His Phe Val Leu Ser Cys Ser Tyr Asp Gly Leu Asp Cys Gln Ala  
 260 265 270  
 Arg Gln Phe Arg Thr Phe His His Pro Thr Tyr Gly Ser Cys Tyr Thr  
 275 280 285  
 Val Asp Gly Val Trp Thr Ala Gln Arg Pro Gly Ile Thr His Gly Val  
 290 295 300  
 Gly Leu Val Leu Arg Val Glu Gln Gln Pro His Leu Pro Leu Leu Ser  
 305 310 315 320  
 Thr Leu Ala Gly Ile Arg Val Met Val His Gly Arg Asn His Thr Pro  
 325 330 335  
 Phe Leu Gly His His Ser Phe Ser Val Arg Pro Gly Thr Glu Ala Thr  
 340 345 350  
 Ile Ser Ile Arg Glu Asp Glu Val His Arg Leu Gly Ser Pro Tyr Gly  
 355 360 365  
 His Cys Thr Ala Gly Gly Glu Gly Val Glu Val Glu Leu Leu His Asn  
 370 375 380  
 Thr Ser Tyr Thr Arg Gln Ala Cys Leu Val Ser Cys Phe Gln Gln Leu  
 385 390 395 400  
 Met Val Glu Thr Cys Ser Cys Gly Tyr Tyr Leu His Pro Leu Pro Ala  
 405 410 415  
 Gly Ala Glu Tyr Cys Ser Ser Ala Arg His Pro Ala Trp Gly His Cys  
 420 425 430  
 Phe Tyr Arg Leu Tyr Gln Asp Leu Glu Thr His Arg Leu Pro Cys Thr  
 435 440 445  
 Ser Arg Cys Pro Arg Pro Cys Arg Glu Ser Ala Phe Lys Leu Ser Thr  
 450 455 460  
 Gly Thr Ser Arg Trp Pro Ser Ala Lys Ser Ala Gly Trp Thr Leu Ala  
 465 470 475 480  
 Thr Leu Gly Glu Gln Gly Leu Pro His Gln Ser His Arg Gln Arg Ser  
 485 490 495  
 Ser Leu Ala Lys Ile Asn Ile Val Tyr Gln Glu Leu Asn Tyr Arg Ser  
 500 505 510  
 Val Glu Glu Ala Pro Val Tyr Ser Val Pro Gln Leu Leu Ser Ala Met  
 515 520 525  
 Gly Ser Leu Tyr Ser Leu Trp Phe Gly Ala Ser Val Leu Ser Leu Leu  
 530 535 540

Glu Leu Leu Glu Leu Leu Leu Asp Ala Ser Ala Leu Thr Leu Val Leu  
545 550 555 560

Gly Gly Arg Arg Leu Arg Arg Ala Trp Phe Ser Trp Pro Arg Ala Ser  
565 570 575

Pro Ala Ser Gly Ala Ser Ser Ile Lys Pro Glu Ala Ser Gln Met Pro  
580 585 590

Pro Pro Ala Gly Gly Thr Ser Asp Asp Pro Glu Pro Ser Gly Pro His  
595 600 605

Leu Pro Arg Val Met Leu Pro Gly Val Leu Ala Gly Val Ser Ala Glu  
610 615 620

Glu Ser Trp Ala Gly Pro Gln Pro Leu Glu Thr Leu Asp Thr  
625 630 635

<210> 9

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
primer

<400> 9

cgcggtatccg cccataaccag gtctcatg

28

<210> 10

<211> 30

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
primer

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ccggaattcc tgcacatcct tcaatcttgc

30

<210> 11

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
primer

<400> 11  
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<210> 12  
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primer

<400> 12  
ccgctcgagg tcttggtgc tcagtgcg 28

<210> 13  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
primer

<400> 13  
cgcggatccc ctcaaagtc catcctcg 28

<210> 14  
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primer

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